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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,880	02/08/2001	Paul Mariaggi	PET-1916	6684

7590

11/20/2002

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EXAMINER

RIBAR, TRAVIS B

ART UNIT	PAPER NUMBER
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1711

11

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/778,880

Applicant(s)

MARIAGGI ET AL.

Examiner

Travis B Ribar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-17 and 19-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-17 and 19-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

This action is being resent due to the applicant's amendment of July 25, 2002 which was not entered in the case in time for the previous office action, but was received at the office before the office action was sent.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claim 12, it is unclear from the language of the claim the scope of resins that the claim encompasses. It is not clear what resins the applicant claims, whether the resin and the monomer may comprise the oligomers listed, or whether the resin and the monomer may both comprise prepolymers. The examiner deems this claim to be vague and confusing.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1, 3, 5-11, 13-14, 19-26, and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiest, Jr. and Walsh et al., each in view of Adembri et al.

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Newly amended claim 1 now includes the limitations of original claims 2, 18 and 20. Both Kiest, Jr. and Walsh et al. contain the requirements of original claims 1-3 and 21-23 (see the earlier office action) but do not contain the requirements of original claims 18 and 20. Those requirements are disclosed in Adembri et al., as discussed in the earlier office action.

The earlier office action also contains a description of how it would be obvious to combine the above references in order to obtain an invention that includes the limitations of original claims 18 and 20. The combination is still deemed obvious for the same reasons set forth in the earlier office action and would result in the invention claimed in claims 1, 3, 5-11, 13-14, 19-24, and 29. Here the examiner notes that newly added claim 29 does not specify that the preform in claim 7 must be made from the halogenated phthalic anhydrides, so since the combination of the references meets claim 7, it also meets claim 29.

Claim 30 includes the further limitations of a low polymerization temperature and petroleum absorption along with the limitations of claim 1. The examiner notes that the inclusion of the fibrous supports in the polymer composition constitutes a future intended use of the composition and will be examined as such.

Regarding the epoxydimethacrylate oligomer in claim 31 and the bisphenol A methacrylate in claim 34, Adembri et al. discloses the creation of those materials in the invention (column 5, lines 8-29 and column 5, line 41, respectively) and encompasses the amounts that the applicant claims. The presence of an inhibitor is known in the art to be applicable to curable or polymerizable systems in order to prevent the

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polymerization or curing reaction from taking place for a set amount of time. The amount of time that the reaction is delayed is dependent on the amount of inhibitor in the composition. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use an inhibitor in the amounts the applicant claims in claims 31-34 in the composition in Adembri et al. in order to delay the curing reaction for a set amount of time.

The petroleum and water absorption properties of the flexible preform, appearing in claims 25 and 26 of the present invention, are properties inherent to a given material. As such, any material that fulfills the applicant's material claims fits these property claims as well. The combination of Kiest, Jr. and Walsh et al., each in view of Adembri et al. meets the material claims set forth by the applicant, as shown above. Therefore even though these references do not refer to the petroleum and water absorption properties in the invention, they still anticipate claims 25-26.

6. Claims 1-11, 13-14, and 18-26, and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Adembri et al.

The earlier office action provides support for this rejection.

The petroleum and water absorption properties of the flexible preform, appearing in claims 25 and 26 of the present invention, are properties inherent to a given material. As such, any material that fulfills the applicant's material claims fits these property claims as well. The combination of Muller in view of Adembri et al. meets the material claims set forth by the applicant, as shown above. Therefore even though these

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references do not refer to the petroleum and water absorption properties in the invention, they still anticipate claims 25-26.

Claim 30 includes the further limitations of a low polymerization temperature and petroleum absorption along with the limitations of claim 1. The examiner notes that the inclusion of the fibrous supports in the polymer composition constitutes a future intended use of the composition and will be examined as such.

Regarding the epoxydimethacrylate oligomer in claim 31 and the bisphenol A methacrylate in claim 34, Adembri et al. discloses the creation of those materials in the invention (column 5, lines 8-29 and column 5, line 41, respectively) and encompasses the amounts that the applicant claims. The presence of an inhibitor is known in the art to be applicable to curable or polymerizable systems in order to prevent the polymerization or curing reaction from taking place for a set amount of time. The amount of time that the reaction is delayed is dependent on the amount of inhibitor in the composition. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use an inhibitor in the amounts the applicant claims in claims 31-34 in the composition in Adembri et al. in order to delay the curing reaction for a set amount of time.

7. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiest, Jr. and Walsh et al., each in view of Adembri et al. as applied to claims 1 and 13 above, and further in view of Scheibelhoffer et al.

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Claims 15-17 involve curing initiators and inhibitors present in the resin of the invention. The combined teachings of Adembri et al. and either Kiest, Jr. or Walsh et al. teach the use of the resin shown in the present application, but do not mention the use of either an initiator or an inhibitor nor the specific initiators or inhibitors claimed by the applicant.

Scheibelhoffer et al. reflects unsaturated polyester compositions. Curing initiators (termed, "promoters" by the reference) are taught as beneficial in decreasing the gel time needed, while curing inhibitors are taught as beneficial in increasing the gel time (column 8, line 67 to column 9, line 4). Specifically, the inhibitors and initiators claimed by the applicant are taught as applicable to unsaturated polyester systems (column 8, lines 30-44 and column 8, line 67 to column 9, line 4) in this reference. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the initiators or inhibitors taught in Scheibelhoffer et al. as initiators or inhibitors in the inventions taught through the combination of either Kiest, Jr. or Walsh et al. and Adembri et al. in order to control the gel time of the resin.

8. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Adembri et al. as applied to claims 1 and 13 above, and further in view of Scheibelhoffer et al.

Claims 15-17 involve curing initiators and inhibitors present in the resin of the invention. The combined teachings of Adembri et al. and Muller teach the use of the

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resin shown in the present application, but do not mention the use of either an initiator or an inhibitor nor the specific initiators or inhibitors claimed by the applicant.

Scheibelhoffer et al. reflects unsaturated polyester compositions. Curing initiators (termed, "promoters" by the reference) are taught as beneficial in decreasing the gel time needed, while curing inhibitors are taught as beneficial in increasing the gel time (column 8, line 67 to column 9, line 4). Specifically, the inhibitors and initiators claimed by the applicant are taught as applicable to unsaturated polyester systems (column 8, lines 30-44 and column 8, line 67 to column 9, line 4) in this reference. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the initiators or inhibitors taught in Scheibelhoffer et al. as initiators or inhibitors in the inventions taught through the combination of Muller and Adembri et al. in order to control the gel time of the resin.

9. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiest, Jr. and Walsh et al., each in view of Adembri et al. as applied to claim 1 above, and further in view of Dumlao.

Claims 27 and 28 require the use of a second polymer in the resin, acting as a "flow regulator," which the applicant defines as any one of a number of thermoplastic polymers. The combination of either Kiest, Jr. or Walsh et al., with Adembri teaches the use of the device shown in the present application, but does not mention the use of blends of materials including thermoplastic polymers with thermosetting polymers. In

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the present invention, the thermoplastic polymers in such a blend are termed "flow regulators."

Dumlao is drawn to a composite structure with a very high mechanical strength for use in a support structure. The resin used in Dumlao is used in conjunction with various fibrous materials (column 7, lines 42-50) and is also shown to possibly comprise a blend of thermosetting materials fulfilling the requirements put forth by the applicant in claim 1 and thermoplastic materials, including polystyrene (applicant's claim 28).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the resins shown in Dumlao in the invention taught by the combination of either Kiest, Jr. or Walsh et al. with Adembri in order to obtain a seal with high mechanical strength.

10. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Adembri et al. as applied to claim 1 above, and further in view of Dumlao.

Claims 27 and 28 require the use of a second polymer in the resin, acting as a "flow regulator," which the applicant defines as any one of a number of thermoplastic polymers. The combination of Muller and Adembri teaches the use of the device shown in the present application, but does not mention the use of blends of materials including thermoplastic polymers with thermosetting polymers. In the present invention, the thermoplastic polymers in such a blend are termed "flow regulators."

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Dumlao is drawn to a composite structure with a very high mechanical strength for use in a support structure. The resin used in Dumlao is used in conjunction with various fibrous materials (column 7, lines 42-50) and is also shown to possibly comprise a blend of thermosetting materials fulfilling the requirements put forth by the applicant in claim 1 and thermoplastic materials, including polystyrene (applicant's claim 28). Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use the resins shown in Dumlao in the invention taught by the combination of Muller and Adembri in order to obtain a seal with high mechanical strength.

Response to Arguments

11. Applicant's arguments filed July 7, 2002 have been fully considered but they are not persuasive. The applicant argues that the properties that the examiner deems inherent to the references are not, in fact, inherent. However, there is no evidence in the record to support that claim. Therefore, the properties are still deemed inherent to the references.

12. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis B Ribar whose telephone number is (703) 305-3140. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Travis B Ribar
Examiner
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TBR
November 18, 2002

A handwritten signature in black ink, appearing to read "James J. Seidleck".

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700